

Work Order ID 145952

Friday, May 06, 2016 8:55:48 AM

145952

Page 1

Item ID: D4462-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Baffle
 Start Date: 5/4/2016 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 5/9/2016 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: Em Date: 16/05/06 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4462	E								

100

0.10

100

Waterjet

FLOW CNC Waterjet

Memo

Cut as per dwg

Prog rev: _____

Dwg rev: _____

1.24

4 ① 16-5-13 DR

DAS
50
9-89

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.04

4 ① 16-5-13 DR

DAS
50
9-89

120

QC8- Inspect parts - second check

0.00

120

QC

Quality Control

Memo

0.08

④

DAS
MAY 30 2016
9-89

P.T.O.

DQA:

Date: 16.05.27



QA Closed:

Date: 16/05/24

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: 145952		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. D4462-1		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☒	Engineering ☐		
NCR No. 16-5799		Scrap ☒		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date: 16-05-16		Step #: 100		QTY Effective: 1		MRB (QS1042) Approval PD 16-05-16 MAY 16 2016			
Description Work Order Deviation				Disposition				Completed By 16-5-16	
water Jet stop working Restart and make Hole offset				Scrap / destroy Replace				Lead hand / Supervisor Approval Verification DAS 30 9-88 MAY 16 2016	
								QC / QA Coordinator Approval PD 16-05-16 MAY 16 2016	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☒	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☒	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 145952***145952***

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Friday, May 06, 2016 8:55:48 AM

Item ID: D4462-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Baffle
Start Date: 5/4/2016 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 5/9/2016 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Bend as per dwg	0.06							
130					DAS	(4)			MAY 16 2016
Brake NC	Memo	0.60			30				
Brake NC	FLANGE HOLES AS PER DWG				9-89				
	Form as per dwg****,ensure that tabs are bent the right direction****								
140	QC6- Inspect dimensions to drawing	0.00							
140						(4)			DAS
QC	Memo	0.00							38
Quality Control									9-89
									MAY 16 2016
150	Chemical Conversion Coat per QSI005 4.1	0.00							
150									
HandFinish	Memo	0.76							
Hand Finishing									

4m f 16/07/16

DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY																																																												
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
OTHER : ☐																																																															

Friday, May 06, 2016 8:55:48 AM

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Accept

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Cust Item ID:

Customer:

Reference:

Run Start *NR1*

Stop ***NR2***

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code
---------	--------	-----------

**Accept
Qty**

Reject Qty

Reject
Number

**Insp.
Stamp**

160

QC7-Inspect Chemical Conversion Coat

0.00

160

OC

Memo

0.04

Quality Control

MAY 19 2016

170

Identify as per dwg & Stock Location: _____

0.00

170

Packaging

Memó

0.04

Packaging

LOCATION: WA003

4

MAY 19 2016

DAS
6
—
9

180

QC21- Final Inspection - Work Order Release

0.00

180

OC

Memo

0.40

Quality Control

16/5/24 Jf

dm 16/05/20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause			FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐						
Misidentified ☐	Past Due ☐							

Picklist Print

Friday, May 06, 2016 8:55:48 AM

Page 1

Work Order ID: 145952

145952

Parent Item: D4462-1

D4462-1

Parent Item Name: Baffle

Start Date: 5/4/2016

Required Date: 5/9/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 11.11.22 NEW ISSUE DD VERF:EC IPP REV:B.
13.10.28 DWG REV PD1 DD VERF:JLM IPP REV:C 14.06.13
AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.063		Purchased		No			sf	528.1830		9.263158			

M6061T6S 063

6061-T6 .063 Sheet

**

16-5-13

Location

Loc Qty

Loc Code

MAT021

192.183

M132358

44.954

M133511

55.9

M134377

91.329

TPI

336

M134496

192

M134604

144

15
4220

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause				FAULT CATEGORY					
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER :									

DART AEROSPACE LTD		Work Order:	145952
Description: Baffle		Part Number:	D4462-1
Inspection Dwg: D4462 Rev: E		Page 1 of 1	

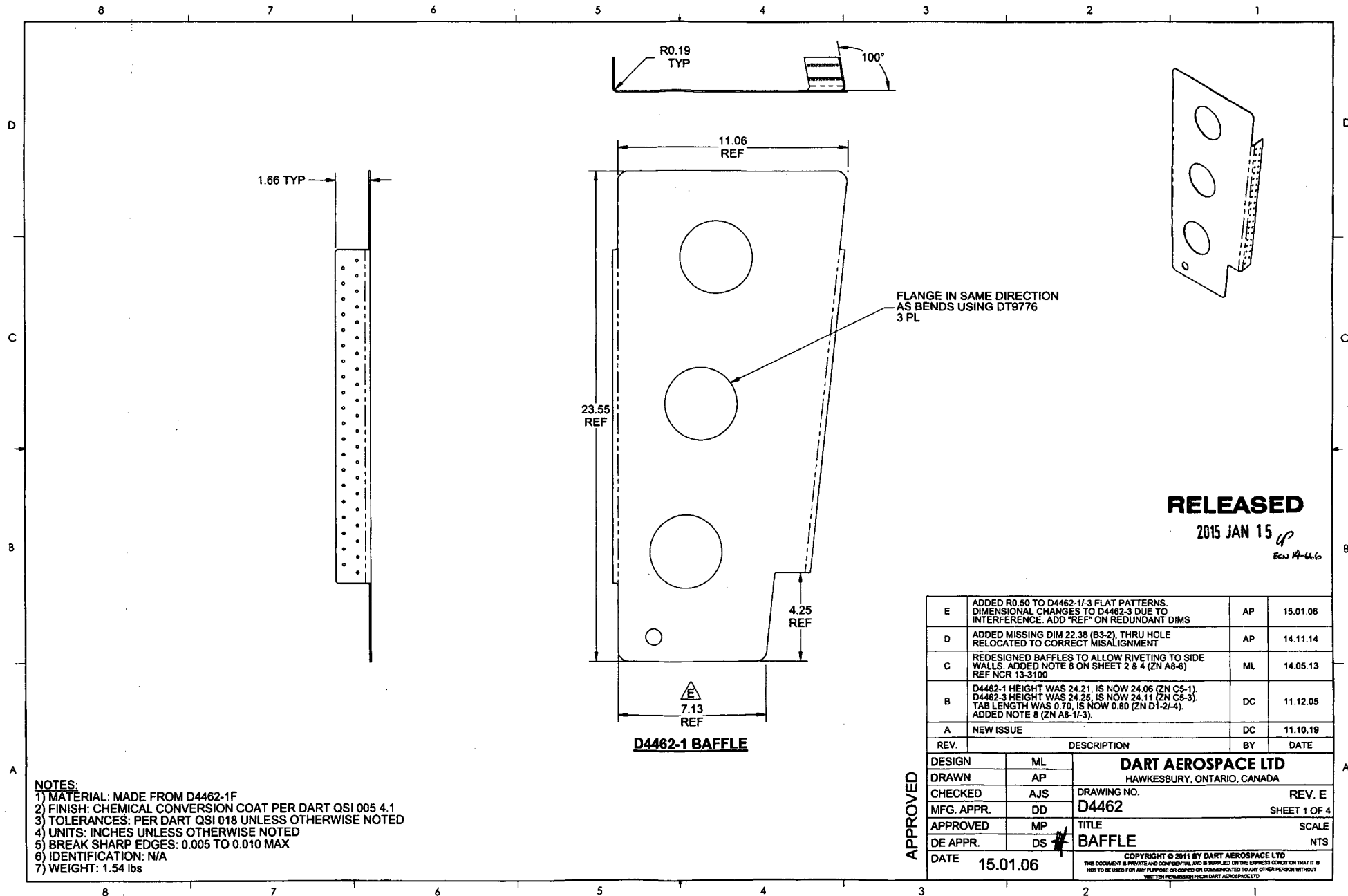
INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.128	+0.005/-0.001	0.128	✓		DC02	
Ø0.768	+0.010/-0.001	0.768	✓			
Ø3.50	+0.012/-0.001	3.50	✓			
0.660	+/-0.010	0.665	✓			
0.38	+/-0.030	0.321	✓			
0.750	+/-0.010	0.752	✓			
1.74	+/-0.030	1.775	✓			
5.77	+/-0.030	5.770	✓			
6.50	+/-0.030	6.507	✓			
12.44	+/-0.030	12.449	✓			
14.16	+/-0.030	14.16	✓			
3.75	+/-0.030	3.75	✓			
4.12	+/-0.030	4.12	✓			
4.28	+/-0.030	4.30	✓			
4.65	+/-0.030	4.60	✓			
11.21	+/-0.030	11.25	✓			
18.29	+/-0.030	18.34	✓			
19.81	+/-0.030	19.80	✓			
22.38	+/-0.030	22.30	✓			
23.55	+/-0.030	23.55	✓			
5.05	+/-0.030	5.06	✓			
9.31	+/-0.030	9.35	✓			
12.54	+/-0.030	12.57	✓			
	DAS					
	50					
	9-89					

Measured by: PR /	Checked by: 38	QC Inspector:
Date: 16-5-13	Date: MAY 16 2016	Date:

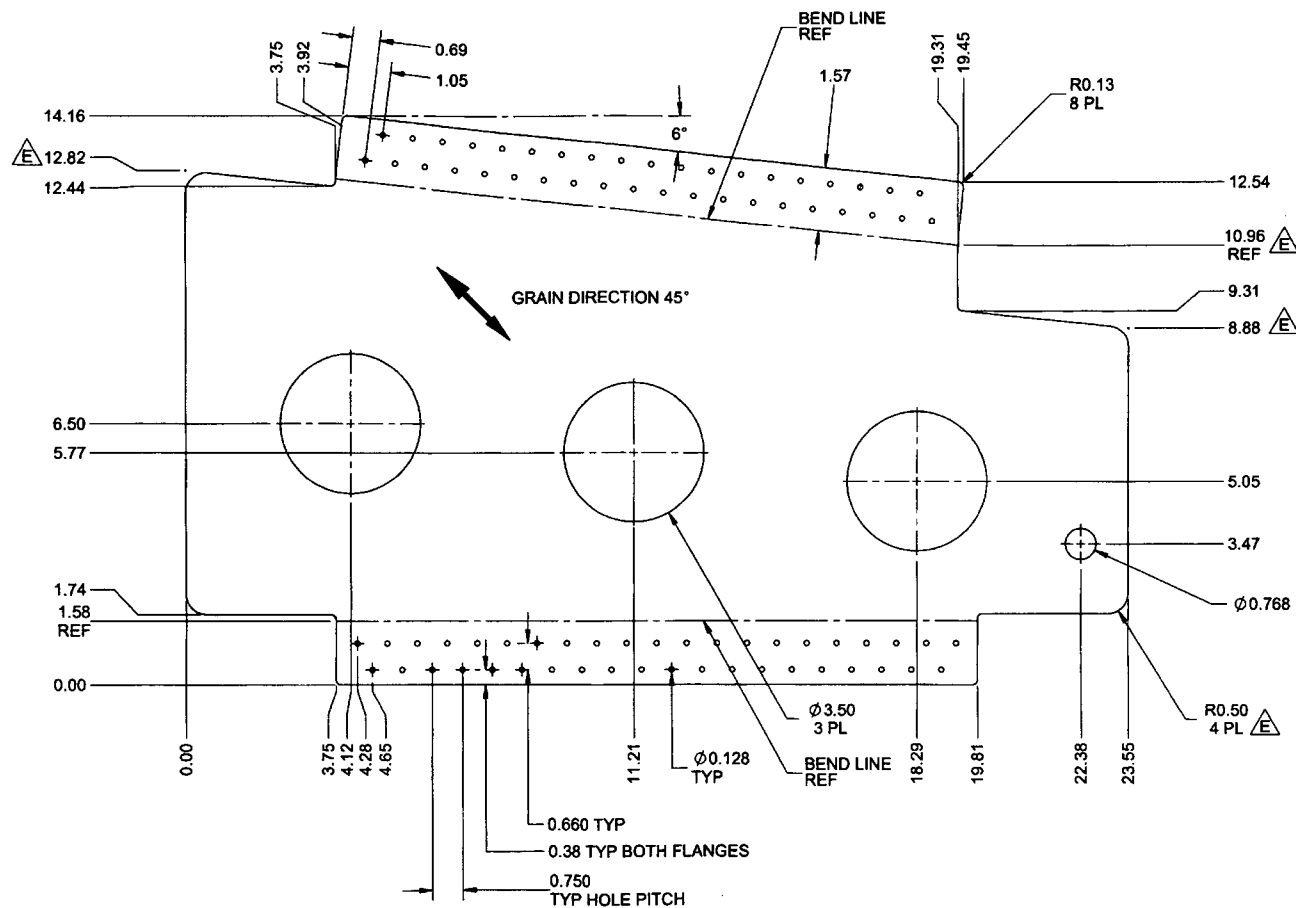
Engineering Approval: (If necessary)	Date:
--	--------------

Rev	Date	Change	Revised by	Approved
A	12.02.01	New Issue	KJ	
B	12.05.15	Dimensions updated per Dwg Rev B	KJ	
C	13.05.08	Dwg Rev updated	KJ	
D	15.01.14	Dimensions updated per Dwg Rev C	KJ	
E	15.01.20	Dimensions updated per Dwg Rev E	KJ	



w/o 145952

dm 16/05/06



D4462-1F FLAT PATTERN

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.063 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M6061T6S.063
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.54 lbs
- 8) ALL NON DIMENSIONED FEATURES PER DRAWING FILE "D4462-1F-E.DXF"

APPROVED

DESIGN	ML	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. E
MFG. APPR.	DD	D4462	SHEET 2 OF 4
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	BAFFLE	NTS
DATE	15.01.06	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED

2015 JAN 15 *ap*

